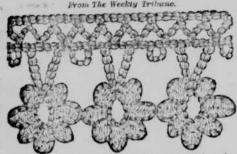
## KNITTING AND CROCHET.

CROCHET EDGING.



The little scallops in this pattern are crocheted as rou go on, and when the length is finished you work the foundation rows upon them. The work is begun on the end of the lower of the two horizontal lines in the cut just before the solitary picot which precedes the first pendent circle of scallops.

1st row: \* 1 Ch., a picot of 5 Ch., 1 DC. on the 1st of the 5 Ch., 7 Ch. This 7 Ch. is the first of the two chains by which the circle of scallops is suspended. Now you begin the circle, thus: A picot of 5 Ch., 1 single on the first of the 5 Ch., a piece of 7 Ch., 1 single on the first of the 7 Ch., 3 picots glose together, each of 5 Ch., a picot of 7 Ch., and another of 5 Ch., 1 single on the 7th of the 7 Ch. before the first picot of the circle. This finishes the first circle. Next make 4 Ch. (for the second of the shains by which the circle is suspended), then 1 long treble on the 2d of the 7 Ch. This "long" forms the horizontal piece or bar between the two chains by which the scalloped circle hangs and completes the arst pendent. Repeat from the \*. It will be noticed that in the circle of scallops the two upper and the three lower picots are of 5 Ch., while the two in the middle-those which are joined together -are of 7 Ch. In working the first picot of 7 Ch. in the 2d and succeeding circles be sure to draw it through the 2d picot of 7 Ch. on the preceding zirele,

2d row: 1 DC. on the first single little picot," 5 Ch., 1 DC. on the long stitch in the last row, 5 Ch., 1 DC. on the chain before the 7 Ch., 5 Ch., 1 DC. on the Ch. after the picot; repeat from \*. 3d row: \* 1 DC. on the 3d of the next 5 Ch.

B Ch.: repeat from \*. The second row, it will be seen, merely makes the zigzag line between the two horizontal bars, while the upper horizontal bar is worked by the 3d row.

ANOTHER NORMANDY LACE.

Mrs. H. L. Q. sends a very handsome variation of the popular Normandy lace and kindly writes: "I wish to add my mite to the collection of patterns if you think this pretty enough to be worth preserving. I am very fond of knitting, and have enjoyed the knitting column very much. I feel much in-Bebted to the ladies who have taken time to write off directions for publication. My little girls write mine for me as I knit." Cast on 28 stitches.

1st row: Over, narrow, over, knit 3, over, narrow, knit 1. over, parrow, knit 1, narrow, over, knit 1, narrow, over, knit 2, narrow, over, knit 1, narrow 2d row: Knit 6, over, narrow, knit 1, over, nar

row, knit 2, over, narrow, knit 1, over, narrow 3 together, over, knit 1, narrow, over, knit 5, over,

3d row: Over, narrow, over, knit 7, over, narrow knit 3, narrow, over, knit 2, narrow, over, knit 1, parrow, over, knit 7.

4th row: Knit 8, over, narrow, knit 1, over, narrow, knit 2, over, narrow, knit 1, narrow, over, knit 2, narrow, over, knit 1, over, narrow, knit 2, over, knit 2.

5th row: Over, narrow, over, knit 2, narrow over, knit 3, over, narrow, knit 2, over, narrow ; together, ever, knit 2, narrow, over, knit 1, narrow, over, knit 9.

6th row : Knit 10, over, narrow, knit 1, over, narrow, knit 5, over, narrow, knit 2, over, knit 2. 7th row: Over, narrow, over, knit 2, narrow, knit 1 parrow, over, knit 1, over, parrow, knit 1, over, narrow, knit 3, narrow, over, knit 1, narrow, over,

8th row: Knit 12, over, narrow, knit 1, over, narrow, knit 1, narrow, over, knit 1, narrow, over, knit 3. over, narrow, knit 1, over, narrow, knit 2, over, knit 2.

9th row: Over, narrow, over, knit 2, narrow, over knit 1, narrow, over, knit 5, over, narrow, knit 1, over, narrow 3 together, over, knit 1, narrow, over, knit 13.

10th row: Knit 14, over, narrow, knit 3, narrow, over, knit 7, over, narrow, knit 1, over, narrow, 3knit 2. over, knit 2. 11th row: Over, narrow, over, knit 2, narrow,

over, knit 1, narrow, over, knit 2, over, knit 1, over, knit 15. 12th row : Knit 16, over, narrow 3 together, over,

knit 11, over, narrow, knit 1, over, narrow, knit 2, 13th row; Narrow, knit 1, over, narrow, knit 2 over, narrow, knit 1, over, narrow, knit 1, narrow,

over, knit 1, over, narrow, knit 1, narrow, over, knit 3, over, narrow, knit 14. 14th row: Knit 13, narrow, over, knit 5, over. parrow, knit 5, narrow, over, knit 1, narrow, over,

knit 2. narrow, over, knit 1, narrow. 15th row: Narrow, knit 1, over, narrow, knit 2 over, narrow, knit 1, over, narrow, knit 3, narrow, over, knit 1, narrow, over, knit 1, over, narrow,

knit 1, over, parrow, knit 12. 16th row: Knit 11, narrow, over, knit 1, narrow, over, knit 3, over, narrow, knit 1, over, narrow, knit 1, narrow, over, knit 1, narrow over, knit 2,

narrow, ever, knit 1, narrow, 17th row: Narrow, knit 1, over, narrow, knit 2, over, narrow, knit 1, over, narrow 3 together, knit 1. over, knit 5, over, narrow, knit 1, over, narrow, knit 10.

18th row: Knit 9, narrow, over, knit 1, narrow, over, knit 7, over, narrow, knit 3, narrow, over, knit 2, narrow, over, knit 1, narrow. 19th row: Narrow, knit 1, over narrow, Vnit 2.

over, narrow, knit 1, narrow, over, knit 2, narrow, over, knit 1, over, narrow, knit 2, over, narrow, knit 20th row: Knit 7, narrow, over, knit 1, narrow

over, knit 2, narrow, over, knit 3, over, narrow, knit 2, over, narrow 3 together, over, knit 2, narrow, over, knit 1, narrow. 21st row: Narrow, knit 1, over, parrow, knit 5.

zarrow, over, knit 5, over, narrow, knit 2, over, knit 1, over, narrow, knit 6. 22d row: Knit 5, narrow, over, knit 1, narrow, over, knit 2, narrow, over, knit 1, narrow, over, knit 1, over, narrow, knit 1, over, narrow, knit 3,

narrow, over, knit 1, narrow. 23d row: Narrow, knit 1, over, narrow, knit 1, carrow, over, knit 1, narrow, over, knit 3, over, narrow, knit 1, over, narrow, knit 2, over, narrow, knit 1, over, narrow, knit 4.

24th row : Knit 3, narrow, over, knit 1, narrow, over, knit 2, narrow, over, knit 1, narrow, over, knit 5, over, narrow, knit 1, over, narrow 3 together, over, knit 1, narrow. In narrowing 3 together put right hand needle

through the first stitch and pull the second stitch through it, and then bind the third over the second, and then knit. and then knit.

Mrs. Q. adds; "I think a tie of double this pattern would be pretty, but my eyes will not bear much fine work, so I have not tried it. I think the wheat-car edge (as corrected in the 'Extra') is very pretty. Can't somebody invent an insertion to match it?"

# KNITTED SHELL PATTERNS.

"Cast on 9 stitches for each pattern and two extra for each edge.

1st row: Knit 2, over and knit one six times, knit 3; repeat from\*; knit 2 for edge. 2d row: Knit 2, \*purl 13, knit 2: repeat from\* 3d row: Knit 2, "slip 1, knit 1, throw the slipped Mitch over, knit 9, knit 2 together, knit 2; repeat

4th row: Knit 2, "purl 2 together, purl 7, purl 2 tegether, knit 2; repeat from \*.
5th row: Knit 2, \*slip 1, knit 1, throw the slipped

stitch over, knit 5, knit 2 together, knit 2; repeat 6th row: Knit 2, purl 1, knit 5, purl 1, knit 2;

repeat from \*. Repeat from 1st row for the length required.

Begin with 1 stitch. 11.

2d row : Knit 3 in one (plain, twist, plain).

3d row : Plain. 4th row: Slip 1, knit 2 in the next (plain and twist), knit 1.

5th row: Like 4th, only knit two at end. 6th row : Plain. 7th row: Slip 1, knit 2 in next, knit 1, knit 2 in next, knit 1.

8th row: Plain. 9th row: Knit 2, knit 2 in the next, knit 1, knit 2 in the next, knit 2.

11th row: Knit 3, parl 2 in the next, parl 1, purl 2 in the next, knit 3,

12th row : Plain. 13th row: Knit 3, purl 2 in the next, purl 3, purl 2 in the next, knit 3.

14th row : Plain. 15th row: Knit 3, knit 2 in the pext, knit 5, knit 2 in the next, knit 3. 16th row: Knit 3, purl 9, knit 2.

17th row: Knit 3, knit 2 in the next, knit 7, knit 2 in the next, knit 3. 18th row: Knit 3, purl 11, knit 3

Continue knitting in this manner, changing the ribs at every fourth row, always keeping 3 stitches for the edges, and increasing in every alternate row one stitch before and after the edge until there are nine ribs, when east off. The shells are afterward to be sewn together.

## SCRAP-BAG.

MITTENS.—L. D. M. will find mitten patterns in TRIBUNE EXTRA No. 75.

TRISTINE EXTRA No. 75.

LEMONSEED LACE.—C. B. writes: "I noticed in your last paper that M. M. had trouble with the lemonseed lace.

"If M. M. wilk nit the second low thus she will have no trouble: Slip 1, knit 3, then knit 1, purl 1, knit 1, purl 1, in the four newly made stitches of the first row, knit 1, purl 1, knit 1, purl 1, then knit 13, and so on.

"This is just the same as in the directions, only I think one is apt to read 'knit 1, purl 1,' once too often in following your directions. The Rose Leaf pattern I found no trouble with."

CROCHET PATCHWORK.—Cut, strips of calice, mus.

think one is apt to reduce the cotten in following your directions pattern I found no trouble with."

CROCHET PATCHWORK.—Cut strips of calico, muslin, silk or woolden into equal widibs. Sew all the bits firmly together, end to end, then erochet them with a short massive hook. It forms a slight open-work, rather rough-looking but very strong; it can be used in this state as coverlets, etc., but is micer mounted on a colored liming, or inclosed as a padding between two thicknesses of cresome, to which it is secured by a sort of quilting.

CASES FOR KNUTING NEEDLES.—Cut from cloth or velvet three pieces about eighteen inches long and two inches wide, shape the ends to a point, bind these all round with ribbon to match, and sew them up from the bottom of the case as far as the side is straight. Fasten a little brass or steel ring just inside each point at the top, so as to project a little beyond it, and through this put a ribbonor a cord to match. A similar case, rather smaller, could be hande for crechet hooks. Ask for the little rings at a fatery store or hardware shop. A pretty case for steel knitting needles could be made of crimson felix which will keep the needles bright; it is firm and strong and very vice to work. Cut a piece eighteen contain a Tertiary flora and famma, as no Tertiary flora and famma, as no Tertiary species of either has yet been found there.

Chalk, Nor is it true, as intimated by Mr. Gardner, that our "so-called Cretaceous recontains of the Dakota group is more modern of the Pakota group is more modern. which will keep the needles bright; it is firm and strong and very slice to work. Cut a piece eighteen inches long, ten inches wide; thru over a piece at the left hand five and a half inches; this makes the part in the case for the four divisions for the needles. At the right hand fold over a piece of four inches; this forms a flap to go over the ends of the needles. Make these two parts of six and three-quarter inches wide, entring out the unper corners. The middle part, which makes the map to go over when the case is floided, is rounded at the corners. The case is first worked all round with buttonhole stitch, done with crimson knitting silk to match the felt; then work the rope stitch all round close under the buttonhole stitch. Work the divisions for the needles in double feather stitch. Sew the sides together with fine silk, and fasten the divisions down the feather stitch to the back with small stitches. There are four divisions for the needles, upon which make the numbers 14, 15, 16, 17, with gold silk. Inside the loose right-hand flap sew a small riag, or a large eye will do, and to this tie a gauge with a piece of creamed and the connections into Europe and Asia.

Cretaceous "Centaceous Chornes The Chalk." Nor is it true, as intimated by Mr. Gardner, that our "so-called Cretaceous rocks" contain a Tertiary flora and faama, as no Tertiary species of either has yet been found there. The flora of the Dakota group is more modern in its aspect than that of the Lower and Middle Cretaceous (Celorado group). Upper Cretaceous (Celorado group). Upper Cretaceous (Celorado group). The facts apparently indicate that the earliest development of Angiospermous plant-life took place here, and this in a temperate flora of which the descendants long afterward—in Tertiary limits—cecupied Greenland, Spitzbergen, etc., and spread by land connections into Europe and Asia. middle part, which makes the nap to go over when the case is folded, is rounded at the corners. The case is first worked all round with buttonhole stitch, done with crimson knitting silk to match the felt; then work the rope stitch all round close under the buttonhole stitch. Work the divisions for the needles in donfole feather stitch. Sew the sides together with fine silk, and fasten the divisions down the feather stitch to the back with small stitches. There are four divisions for the needles, upon which mark the numbers 14, 15, 16, 17, with gold silk. Inside the loose right-hand flap sew a small ring, or a large eye will do, and to this tie a gauge with a piece of crimson silk braid. When the case is folded in half it is 3½ inches wide; it will hold about seventy kytting-needles—the short ones, of course.

#### THE WEIMAR OF TO-DAY.

Weimar Letter to The Pall Mall Gazette.

The great material advance witnessed in Germany is nowhere more striking than in the charming little city of Weimar, which is indeed no more the Weimar of former years. It is exactly ten years ago almost to a day since I entered for the first time its grass-grown, slumbering streets; not a vestige of animation anywhere, the silent monamental aspect of the place chilling the new-comer, yet bringing out vividly the characteristics of the most illustrious capital throughout Germany. Can this indeed be Weimar f. A handsome boulevard stretches from the railway station to the town; round about rise well-built country houses and suburban villas, amid gardens, where formerly were to be seen only fields and waste ground; cabs are to be had by scores; private equipages that would not discredit the Graben of Vienna are flashing about, the ladies are dressed with a touch of French elegance, and new shops, with much display in the windows, and are dressed with a touch of French elegance, and new shops, with much display in the windows, and are dressed with a touch of French elegance, and are dressed with a touch of French elegance, and new shops, with much display in the windows, meet my gaze at every turn. Ten years ago Weimar did not possess a handsome shop, while private equipages were almost unheard of. In certain respects, however, it is delightful to find in middle age the Weimar of our youth. The little city is still animated with the spirit of the great men whose statues so nobly adorn it. The Weimar Theatre has ever remained true to its ancien traditions, and while light and even objectionable French pieces find their way to the larger capitals, here the masterpieces of Schuller and Goethe still maintain while Lessing and Shakespeare al

say, a series of representations of the chief works of the two poets—while Lessing and Shakespeare always come next in favor.

We had chosen this especial Saturcay, the 11th inst., for our visit, in order to see what has interested the public here more than anything else of late years—namely, the representation on consecutive nights of the first and second parts of "Faust." These have been given again and ariain, and will be repeated next Saturcay and Sanday, when the theatrical season closes for the summer. "Have you seen the 'Faust'?" I asked of our cabman. "Ja wohl," was the reply, "but only one. I am sorry to say. There are such beautiful things in it, one should see them again and again. But I can only alford to go to the theatre twice or three times a year." The box attendant told im, bringing out an edition of "Faust" from his poeset, that he knew both parts quite well, and all the srincipal plays of both Goethe and Schiller. I will make no comment here on this second part of "Faust," which has created since its first representation three years and a half ago such extraordinary interest throughout German, but nearly say a few words on the spirit pervading the Weinar stanc as herein exemplified. The ceptit de corps manifested by the actors is no less delightful than the whole-hearted sympathy accorded by the audience, and the performance is regarded as an artistic whole.

The greatest possible respect for both actors and public is enforced, no one for love or money being permitted to come late and so interrupt the performance. Here I noticed the Grand Duke steal in quiet as a mouse because the act had begin. English writers dwell on the vulgarity of German lite, and many will be shocked when I relate that between the acts ladies and gentlemen regaled themselves in the corridors with beer, wine and cakes brought any will be shocked when I relate that between he acts ladies and gentiemen regaled themselves in the corridors with beer, wine and cakes brought with them in little baskets. The fact is, many had one by rail from short distances and could not cach their homes till past midnight. I fail to dis-ern any vulgarity here. As soon as the baskets are put away and people took their scats, all was one ontated interest and enjoyment. There is no loubt that these high intellectual tastes form the gright side of German life. Some familiar faces I had, many I miss; among these Ottlile von Gosthe, who ten years ago used to welcome me to her tea-lable, and talk of "der Vater." Her two sons, now-elderly and both unmarried, are the sole descendtable, and talk of "der Vater," Her two sons, now adderly and both unmarried, are the sole descendants of the poet. Schiller is represented by a young lad, son of his granddaughter, Countess von Gleichen; an aged female descendant of Herder lives here, the last, I believe, of his race and name.

# A FARMER-LIKE PRESIDENT.

6. W. Julian in The International Ecreew.
Early in the session I called on President Taylor, outh Mr. Giddings and Judge Allen. I had a very trong cornosity to see the man whose name I had sed so freely in two exasperating political campaigns, and desired to stand corrected in my estimate of his character if I should find such correction to be dominable by the truth. pagns, and desired to stand corrected in my estimate of his character if I should find such correction to be demanded by the truth. Our interview
with the old solder was exceedingly interesting
and amusing. I decidedly liked his kindly, honest,
farmer-like face, and his old-fashioned simplicity
of dress and manners. His conversation was awkward and labored, and evinced a tack of self-possession; while his whole demeanor suggested his
frontier life, and that he had reached a position for
which he was singularly unfitted by training and
experience, or by any natural aptitude. In the few
remarks which he addressed to me about farming in
the West, he greatly amused us by saying: "I
would like to visit Indiana, and see your ploughs,
hoes,—and other reaping implements:" failing, as
he often did, to find the words he wanted. He frequently mispronounced his words, hesitated and
stammered, and sometimes made a breakdown in
the middle of a seatchee. But although he seemed
to be in the hands of the slaveholders, and was
then about to proclaim his policy of Congressional
non-intervention with slavery in the Territories, he
impressed me as being personally honest and patriotic.

In this opinion I was fully confirmed later in the

In this opinion I was fully confirmed later in the session, when he sorrowindly but manfully resisted the attempt of Senator Davis, his son in-law, and other extreme men to bully him into their measures, and avowed his sympathy with the Antislavery sentiment of the country. I believe his dying words in July, "I have tried to do my duty," were the keynote of his life, and that in the Presidential campaign of 1848 I did him much, though unintentional, mjustice.

According to The Scientific American, this country possesses the largest masonry arch in the world—an arch which forms part of one of the most important engineering achievements of recent years, the aqueduct by which the city of Washington is supplied with water. The arch in question carries the aqueduct over the Cabin John Creek, with a span of 220 feet.

\* GEOLOGIC FLORAS.

Professor J. S. Newberry has a long letter in he last number of *Nature*, in reply to Mr. J. Starkie Gardner, who had stated that the fossil Starkie Gardner, who had stated that the fossil plants in our Cretaceous rocks represented a flora really Tertiary, and that no American or European so-called Cretaceous land thora could be found to be as old as the English white chalk. In commenting upon these statements Professor Newberry cites the following facts: In our Triassic series we have in some places beds of coal and the remains of a vegetation decidedly Mesozoic in character, consisting of Cycads, Conifers and Ferns, but, as far as we yet know, without a single Angiosperm. In the Jurassic age the eastern half of the North American Continent formed a land-surface, for the sediments of the Jurassic sea are confined the sediments of the Jurassic sea are confined to a somewhat irregular area in and west of the Rocky Mountain belt. Of the Jurassic flora of North America we as yet know little or nothing; but the continent that bordered the Jurassic sea ultimately became covered with a new, varied and highly-organized flora, of which the

origin is yet unknown.

In the Cretaceous age all the continent lying east of the Wasatch Mountains was affected by east of the Wasatch Mountains was affected by a subsidence which brought the sea in from the Gulf of Mexico with a front 1,000 miles wide, and the great inland sea thus formed gradually extended northward till it reached nearly, if not quite, to the present shore of the Arctic Ocean. The waves of the Cretaceous sea in their advance swept before them a shore that was covered with a luxuriant forest of at least one handred. one hundred species of Angiospermous trees; and the remains of trunks and twigs, leaves and fruit, were buried up in the sheet of beach material which accumulated all along the advancing shore line, and which now forms the Sandstones of the Dakota group. Up to the present time very few mollusks have been found in this group, and they are not sufficient to fix with exactness its relation to the Cretaceous series of other countries. The plants, too, are distinct from any found in Europe,

AN OPTICAL BOTANICAL PHENOMENON. In a letter lately published, M. de Thiersant records a curious phenomenon witnessed in Guatemala on the 16th of February and eight following days. For about three hours about midday, if one looked toward the sun, one saw, midday, if one looked toward the sun, one saw, a little distance above the ground, multitudes of small bodies like snow-flakes flitting past, appearing and vanishing instantaneously. Beautiful it is colors were often observed. Some people supposed that the temperature having fallen for some days, these particles were fragments of snow formed in the upper atmospheric region. But it turned out that the phenomenon was botanical. It was a migration of seeds of certain plants, which at that time of the year, getting free from their retaining ties, became the sport of winds by rason of ing ties, became the sport of winds by reason of fine filamentous feathers attached to them. The visual effects, M. de Thiersant remarks, were similar to that which occurs when a solar beam, entering a room, reveals a multitude of corpuscles that are invisible without it.

TRESERVATIVE WRAPPING-PAPERS. Two new preservative wrapping-papers have been recently brought out, says *Progress of Science*, one designed for fruit and one for furs, hanging it in the air to dry. The path should be made from a strong alcoholic solution of salicylic acid, diluted with as much water as it salicylic acid, diluted with as much water as it are mathemat precipitation. The apples, sancy he acid, diluted with as much water as it will bear without precipitation. The apples, oranges or other fruit may be wrapped in the paper before packing, and when the fruit reaches its market the paper can be removed and used again. A manifla wrapping-paper may be prepared for resisting moths and mildew by dipping it in a prepared bath, squeezing it and drying it over hot rollers. The bath is made by mixing seventy batts of oil removed. made by mixing seventy parts of oil removed by the distillation of coal tar maphtha, five parts of crude carbolic acid containing at least

# petroleum.

50 per cent of phenola, twenty parts of thin coal tar at 160° Fahr., and five parts of refined

A DURABLE WHITEWASH. A DURABLE WHITEWASH.

A correspondent of The Scientific American gives the following directions for a good wash:
For one barrel of color wash—Half a bushel whate hime, three pecks hydraulic cement, ten pounds under, ten pounds ochre, one pound Venetiau red, quarter pound lampblack. Stake the hime; cut the lampblack with vinegar; mix well together; add the cement, and fill the barrel with water. Let it stand twelve hours before using, and stir frequently while patting. before using, and stir frequently while putting it on. This is not white, but of a light stone color, without the unpleasant glare of white. The color may be changed by adding more or less of the colors named, or other colors. This wash covers well, needing only one coat, and is paint. I have known a rough board barn washed with this to look well for five years, and even longer, without renewing. The cement hardens, but on a rough surface will not scale.

## ANCIENT MAN IN RUSSIA.

The discoveries of remains of palæolithic man in Russia, says Nature, continue to be most interesting. Recently M. Shaposhnikoff disinteresting. Recently M. Shaposhnikoff dis-covered a great quantity of stone implements in the district of Valdai, where a torest has been cut down and the wind has denudated the sand of the subsoil. The implements belong to four categories: 1. knives and saws similar to those of Moustier, St. Acheul, and Solutre, more per-fect than any found previously; 2. the same in miniature, most accurate, and made of the finest kind of flint—they might have been used as ornaments, or for tationing; 3. figures of animals and men made in flint, and relief pictures of the same, also in flint; 4. ornamental designs on stone. The collection i especially in miniature implements. The collection is very rich,

## STOVES AND HEALTH.

Professor Ira Remsen, of the Johns Hopkins University, has been investigating the effect of cast iron stoves on health-whether the stoves do or do not allow deleterious gases to escape. The verdict is in favor of the stoves. Professor Remsen finds that carbonic oxide—the gas alleged to be so deleterious—does not pass hrough red-het cast-iron even of the thickness of an eighth of an inch. Moreover, a careful Moreover, a careful examination did not in any one instance detect any deleterious gas given out by a well con-structed furnace. Where carbonic oxide gas is found, its presence, it is declared, is not due to its passing through east-iron in any appreciable quantity.

REMARKABLE BRIDGES.

According to The Scientific American, this of recent years, the aqueduct by which the city of Washington is supplied with water. The arch in question carries the aqueduct over the Cabin John Creek, with a span of 220 feet.

The height of the arch is 101 feet, and the

SCIENCE FOR THE PEOPLE, width of the structure 20 feet. The arch forms width of the structure 20 feet. The arch forms an arc of a circle, having a radius of 134,2852 feet. When the centre scaffolding was removed, the arch (unlike all other works of the kind) did not settle, the keystone having been set in winter, and the centre struck in summer. The other notable masonry arches of the world are the Ches er arch across the river Dee, at Chester, England, with a span of 200 feet; the famous centre arch of the new London Bridge over the Thames, with a span of 152 feet; Pont-y-Prydd, over the Taft, in Wales, 140 feet; the bridge across the Scine, at Neuilly, Font-y-Tryan, over the Tall, in Walles, Lar feet; the bridge across the Seine, at Neuilly, France, with five spans each of 128 feet; the nine spans of Waterloo Bridge, London, each 129 feet; and the celebrated marble Rialic Bridge in Venice, with a span of 98½ feet.

### DEATH.

For The Tribine.

Daintily she broke the rose-bad from its green and wiry stem. Full of hidden beauty's promise, of the promise of a While its petals scarce unfolding told of deeper tints within,
Of the flush of crimson glory that to-morrow might

Wrong, and cruel? Thus to pluck it with its promise unfulfilled? Folly! mught but tender folly such opinion ever held, For its promise is its beauty; pleasure's summit ne'er is gained, Hope's fruition palls in ripening, only prized while unattained. E. N. B.

A FAMILY OF INVENTORS-THE BROTHERS SIEMENS.

From Cassell's Magazine

It would be difficult to find a family more richly It would be difficult to find a family more richly endowed with intellectual power and inventive genius than that of the late Ferdinand Stemens, of Lenthe, near Hanover. The sons of this gentleman numbered eight, of whom five are still living. As eminent engineers, as men of enterprise, they stand in the first rank, and three of the brothers have, through their inventions, attained a world-wide fame. The eldest brother, Werner Siemens—the "Berlin

through their inventions, attained a world-wide fame.

The eldest brother, Werner Siemens—the "Berlin Siemens," as he is generally designated—was born at Lenthe, near Hanover, in 1816. He received his education at the Gymnasium of Lubeck, from whence he went to Berlin, and entered the Prassian Artillery as a volunteer. His eminent talents soon opened to him the deors of the Military School in Berlin; but the theories of violeity and the effects of projectiles seem not to have had much—ttraction for him, and he turned his attention mainly to practical chemistry and physics. Thus his first invention (1841) was eminently a peaceful one—namely, a new method of gilding and silvering by galvanic deposit. A few years later he constructed, along with his brother William, a new "governor" for steam-engines which attracted much attention, and had an extensive application. In 1845 he brought out—also in conjunction with his brother—the well-known process of anastatic printing, which also niet with similar success. On the introduction of electric telegraphs, Werner Siemene's name took a prominent place. The conducting wires, being at that time land under ground, required an insulating covering. For this purpose Werner Siemens employed gutta-perion; and the machine constructed by him for covering is even how used in the manufacture of cables. In 1850 he left the aimy, and with the valuable aid of Mr. Halske, a practical mechanical engineer, founded the far-famed firm of Siemens & Halske. This establishment soon grew to large dimensions, and became one of the chief centres for the application of electricity and magnetism to the industrial arts, while at the same time alloriting a means of practical training for many young engineers. In 1850 Werner established the premiant discovery of Weiner Siemens is the block-signal system on railways, the melodious bell-like tonessed which may be heard in many contiries, and which gives not only more security to the tumuit of a railway was more security to the tumuit of a railway was mor tonessef which may be heard in many countries, and which gives not only more security to the and limo, but lends a certain poetry to the tunnit of a rail-way journey. Since 1854 Signens Brothers have had in St. Petersburg a large manufactory for telegraph apparatus, and this business was, till 1869, conducted by Carl Siemens. Wetner Siemens is a partner of the London firm of "Siemens Brothers"; indeed, the three firms of Berlin, London and St. Petersburg are the common property of the brothers Werner. William and Carl. From these three centres issue forth many bratch establishments; even in the far Cancaust the brothers possess copper works and oil springs. From this may be gathered the magnitude and importance of their undertakings.

Werner's newest invention is the electric railway, a model of which, exhibited at the late Berlin Industrial Exhibition, gave as much pleasure as it called forth appreciation. Many honors have been conterred on this most fertile inventor.

Here we may now say a few words with regard to Carl Semens, born 1829. As an inventor he does not come much into the foreground, but the brothers owe much to him for the energy with which he has helped to further the extension of their inventions, more especially in Russia. As formerly in St. Petersburg, so lately in London he conducted the telegraph business with emmently practical results. He has now returned to St. Petersburg, to be at the head of the establishment there.

at Leithe, 1825, and he also received his prepara-tory education at the Gymnasium of Lubeck. His practical work began at the engine-works of Count In 1843 it was arranged with his brothe

Werner that he should visit England, in order to introduce the method of gliding and silvering by galvante deposit. A year later he returned to England to patent the brothers' joint invention of the differential governor for steam-engines. In the same year was brought out the process of anastatic printing, also an invention of the two brothers. Between the years 1844 and 1847, William Sumons was engaged in railway works, in improving Hoyle's calico-printing, and in the invention of his chronometric governor. Several of these governors are in use at the Royal Observatory at Greenwich, for controlling the motion of transit and recording instruments. In 1846 he introduced ernors are in use at the Reyal Observatory at Greenwich, for controlling the motion of transit and recording instruments. In 1846 he introduced has double-cylinder air pump, which even to the present day is exclusively used. In 1854 he intro-duced his celebrated water-meters beautiful through their simplicity, which are extensively used both in this country and on the Continent. As regards practical importance and economy in find, the invention of the regenerative gas furnace, which he worked out in conjunction with his brother Frederick Siemens may be looked upon as his greatest discovery, and one which should alone secure for the brothers a world-wide reputation. For the laying of submarine cables, William Siemens planned and had built by Messra, Mitchell, of Newcastle, the well-known steamer Furnday, which has proved itself perfectly adapted for the work. The Indo-European lines, as well as several Atlantic cables, were manufactured at the telegraph works of Siemens Beathers of Woods of Siemens

work. The Indo-European lines, as well as several Atlantic cables, were manufactured at the telegraph works of siemens Brothers at Woodwich. The most important of these submarine telegraph enterprises was the Direct United States Cable, for which the Faraday was constructed, and with the laying of which Carl Siemens was extrusted.

The fourth of these highly-gifted brothers Frederick—the Dresden Siemens, as he is called—was born in 1827 at Menzendorf, near Lubeck, at large property rented by their father. Frederick, like lies brothers, was intended to pass through the classes of the Gymnasiun of Lubeck, but having reached the third class, the desire of liberty arged him to whandon his place on the school-bench and to go forth into the world. He went on board a merchant ship when scarcely sixteen years of age, and there forth into the world. He went on board a increhant ship when scarcely sixteen years of age, and there this youth, whose mental capacities afterwards proved so great, had to work as a common salor. After two years of this scafaring lite, his brother Werner tried at Berlin to get him into the Prassian marine service. In the meantime Frederick was allowed to assist in the meantime Frederick was allowed to assist in the manifold experiments of his brothers. This chained him with a very different power from that which bound him to the ship, and out of the young sallor there was soon formed a clever, industrious assistant, who was also an originator.

clever, industrious assistant, who was also an originator.

In 1848 Frederick went to England, and continued his practical studies with his brother William. The principal interest was the newly discovered regenerative system, and he was so fortunate as to make this system practical by its application to the ordinary immaces, where a very high temperature is required. In 1858 Frederick built, in the works of the brothers in Berlin, the first regenerative gas farnace, which was the precursor of the many now employed in Germany, Austina, etc. The second brother, Hans, possessed a large glass manufactory in Dresden, and on his death in 1867 Frederick undertook the management of this establishment, and concentrated his great talents on perfecting the manufacture of glass. His works at Dreslen, as regards the quantity exported, may be considered the most important in Germany. He has established three other factories in Bohemia and Saxony, which give employment at present to 2,000 workmen. The application of gas furnaces to glass making was a marked epoch in this branch of industry. Important, also, is his invention of the dustry. Important, also, is his invention of the continuously-working glass furnace, in which the materials are inserted, and flow out thoroughly melted and ready for working. A further discovery is a new method of cooling glass quickly, and thus producing "toughened glass." This material will soon compete, for many purposes, with wood and iron. Its power of resistance is extraordinary, and even surpasses that of cast-iron. Frederick has also turned his attention to the possibility of producing a "motor" to perform cheaply and efficiently those small operations in workshops and households making was a marked epoch in this branch of dustry. Important, also, is his invention of on a new scientific principle, has come near the ful filment of it, and obtained for him at the Vienna Exhibition of 1873 the medal for Progress. The

# RELIGIOUS INTELLIGENCE.

THE BAPTIST REVISION .- Baptists will be in terested to learn that the Baptist Publication Society of Philadelphia is pushing forward the work of preparing the newest version of the New Testament for publication, and that the text is nearly ready for the press. According to the Fev. Dr. Henry G. Weston, president of Crozer Baptist Seminary, who has the work in to the Eev. Dr. Henry G. Weston, president of Crozer Baptist Seminary, who has the work in charge, "no difficulty whatever was experienced in enlisting the requisite interest in the undertaking, and the necessary funds were raised in fifteen minutes." In speaking of this work recently to a reporter of The Philadelphia Times, Dr. Weston said: "We shall modernize the spelling and substitute everyday forms of speech. For instance, we shall use 'who' or 'that' for 'which' where it refers to persons, and 'knew' or 'know' for 'wot' or 'wist.' About the only change that will strike anyone as being to the advantage of Baptists particularly will be the substitution of 'in' after 'baptize' for 'with,' so that passages will read 'baptize in water' instead of 'baptize with water.' The prefix' saint' in the titles of the gospels has been stricken out, and here you see, 'holding up some proofs of the forthcoming work, "the titles read valuing Marthey gospeis has been stricken out, and here you see," holding up some proofs of the forthcoming work, "the titles read plainly, Matthew, Mark, Luke and John. We substitute 'spirit' for 'ghost' all through. We regard the word 'spirit' as much preferable to 'ghost.' There will be many other changes of a similar character. Ours will be examined. acter. Ours will be a version that we shall be able to circulate conscientiously. But it will not be exclusively for Baptists. Presbyterians, Congregationalists and others may use it. It will be distinctly called the 'American Revised Edition of the New Testament.' We do not expect that it will in do not expect that it will immediately supplant all other versions even in the estimation of Baptists. I would not wish it to. But we can read it with pleasure, and scholars will find it useful as they do all translations, for com-parative purposes." parative purposes.

Profesor Dwight on the Revision—
The Rev. Dr. Timothy Dwight, Professor of Divinity at Yale College, who is one of the American New Testament Revision Company, at the request of the Editor of Public Opinion, published in London, has turnished that journal with the first of a series of critiques to be supplied by several eminent scholars and writers, on the different books of the revised New Testament. Professor Dwight in his last paper discusses the changes made in the First Epistle to the Corinthians. He takes up, first, cases in which a wrong translation has been corrected. "Prominent among these," says Professor Dwight, "so far as this Epistle is concerned, are several passages where the error is due not to a false conception of the meaning on the part of the old translators, but rather to the altered significance which the progress of time has given to words. The idea of the writer's thought which the modern reader gets is a false one, and, unless new words are supplied, he must repain under a misunderstonding." thought which the modern reader gets is a false one, and, unless new words are supplied, he must remain under a misunderstanding."

After illustrating these cases others are referred to in which there may be a doubt in some minds as to the correct rendering, or, again, where the question is only as to whether the tenses of verbs should be given with their precise force in the Greek. "In cases of this character," says the writer, "those who are strongly attached to the old version may claim that it is sufficiently accurate, and yet we are sure that sufficiently accurate, and yet we are sure that the judgment, not only of scholars, but of the great company of Christian readers, will, after due consideration, determine that the revisers have been faithful to the truth in the changes which thay have introduced? which they have introduced."

who was recently sent to Worcester, Mass., by the Mission Board of the New-York Conference of the Evangelical Lutheran Church, to look after the spiritual interests of about 3,000 8wedes who have settled in the city in the last two years, in an address delivered a few days ago, spoke as follows in regard to the condition of his Church and its work among the Swedes: "The Evangelical Lutheran Church in this "The Evangelical Lutheran Church in this country consists of four great ecclesiastical bodies—the Synodical Conference, the General Conneil, the General Synod North, and the General Synod South. To the General Council belongs the Swedish Evangelical Lutheran Church of this country. This Church originated in the year 1849, when my father came over to this country. And the first congregation organized consisted, I believe, of seven members. At present our Swedish Latheran Church in the United States numbers about 70,000 members, with more than 40,000 congunicants, more than 300 congregations, about 150 pastors, six religious papers, four orphans homes, two colleges and one the ological seminary, the seminary and one of the colleges tohomes, two colleges and one theological semi-nary, the seminary and one of the colleges to-gether having thirteen professors and about 160 students. From the very first our Church has been in a special sense a missionary Church. Our pastors are missionaries, for, though having their own local churches, they always spend at least some part of the year in missionary work hunting up the Swedes, who are scattered all over this country, from the New-England States to the Pacific coast, from and trying to bring them to Jesus Christ,

THE ROMAN CATHOLIC CHURCH,-The extent and elaborate organization of the Rom: Catholic Church throughout the world are illu trated in a striking manner by an official li-lately published at Rome under the direction of the Pope. The enumeration of hierarchical titles in the East and West together includes a total of 1.135 offices, all of which except about 100 are at the present moment occupied. Of the dignitaries who rank next below the Supreme Pontiff, there are sixty-three, and of patriarchs, comprising both the Western and the rastern rites, there are eleven. The archhishops of the Latin rite number no less than 137, with 600 bishops. The Oriental rite is administered by only iffy-one archbishops and bishops together. Of officials bearing the title of apostolic delegates there are six, of apostolic vicars twenty-six, and of apostolic prefects 102. But of the bishops and archbishops in many as 290 are appointed to titles called in partibus infidelium. Four members of the College of Cardinals are over eighty years of age and only three are under fifty. Twenty-nine or nearly half of the sacred college, are between seventy and eighty years old; lifteen are be tween sixty and seventy, and twelve are be-tween fifty and sixty. There are twelve Komar Catholic bishopries and one archbishoprie in Great Britain, while in Iteland there are twenty-four bishopries and four archbishopries In the whole of the British dominions the number of Roman Catholic prelates was recently estimated at 118. Bishop Edward Herzog has an interesting

letter, dated Berne, Switzerland, June 14, in the current number of *The Churchman* in regard to current number of The Churchman in regard to the recently published statement that the Old Catholies are about to establish a church in New-Orleans. After stating that he has no relations whatever with the Old Catholies of New-Orleans and that he is probabited from exercising any episcopal jurisdiction outside of Switzerland, Bishop Herzog writes as follows: "I wish from my whole heart that also in the United States the Roman Catholies may rise against the errors and abuses of the Papal Church. But in my opinion, for that end the establishment of a separate Old Catholic community would rather advise and urge the reformed Catholies of your country to place themficial. I would rather advise and arge the re-formed Catholics of your country to place them-selves under the jurisdiction of the catholic episcopate of your Church. With full confi-dence in the wisdom and generosity of your bishops, I defer to them the question whether certain concessions in non-essientical litargical matters should be granted or denied to re-formed Catholic communities which might seek admission into your Charch." admission into your Church.

The Right Rev. James O'Connor, who was made Eishop of Nebraska in 1876, has come East to consult with Catholic leaders in regard to the work of his Church among the Indians. In a conversation he said recently: "The in dian policy with respect to religion pursued by the last two Administrations was altogether opposed to the spirit of the country. The reservations were parcelled out to the various denominations, and no clergyman was admitted into any reservation that had not already been set apart for those of his faith. By this ar-rangement some 50,000 Catholic Indians were lost to the Catholic Church. President Garfield will, I understand, reverse the policy of the preceding Administrations, and all w the clergymen to give the aberigines an opportunity of embracing whatever religion impresses them as being the true one. The action is to be taken, I am told, at the request of the Presby-terians." The Archbishop of Baltimore, who is the president of the Indian Catholic Mission Bureau, will send a circular letter to all the Catholic bishops in the country asking their | The Christian Union,

opinion as to the best plan of preparing to re-ceive these Indians into the Church.

At the seventh annual council of the Union of American Rebrew Congregations, which began its sessions at Chicago Tucsday, the Rev. Dr. A. Huebsch, of New-York, offered a resolution asking the United States Government to abolish that portion of the work of the Census Burean relating to the statistics of religious denominations. In presenting this resolution Dr. nominations. In presenting this resolution Dr. Huebsch said that he did not think the State had the right to ask the people of this country as to their religious beliefs, as the Church and the State were separated by a wide gulf. The gencral sentiment of the delegates, however, was that the Union had no right to meddle with the affairs of the Department of the Interior, and Dr. Huebsch finally withdrew his resolution.

According to a Glasgow correspondent of The National Baptist, the last has not been heard of Professor Robertson Smith's case. His friends, it is stated, are nolding meetings in Edinburgh to prevent his removal from his professorship. "The decision of the Free Assembly," says the correspondent, "in depriving Professor Smith of ecclesiastical rights and powers, distinct from the functions of teaching is, in the opinion of many of the ablest ministers and members of the Free Church, inconsistent with the terms on which he was appointed to the Chair, a violation of the Scriptural principles of discipline, and implies an assumption of lordly and despote power."

The "Believers' Meeting for Bible Study" will be held this year at Old Orchard Beach, Maine, from August 19 to 28. The change in the place of meeting from Clifton Springs, N. Y., to the New-England coast was made at the earnest request of those living in the latter part of the country. Four hours each day—two in the morning and two in the afternoon—will be devoted to Bible study. Ameng those who are expected to take charge of the exercises at the different sessions are J. H. Brookes, of St. expected to take charge of the exercises at the different sessions are J. H. Brookes, of St. Louis, A. J. Gordon, of Boston, H. M. Parsons and R. Cameron, of Canada, and G. C. Needham, of Chicago.

Some time ago a memorial stone, a granite Some time ago a memorial stone, a granite boulder weighing about live tons, was placed on the spot in Talmadze, Conn., where in 1809 the Rev. David Bacon, the father of the Rev. Dr. Leonard Eacon, established the first church in the town. The ground had been the site of the old Bacon cabin. The stone bears the following inscription: "Here the first church in Talmadze was grathered in the bacse of Permader was grathered in the bacse of Permader was grathered. madge was gathered in the house of Rev. David Bacon, Jan. 22, 1809. June 2, 1881."

The will of the late John S. Cobb, of Weymouth, Mass., provides that \$3,000 shall be given to the American Board of Commissioners for Foreign Missions, \$3,000 to the American Seaman's Friend Society, \$2,000 to the American Home Missionary Society, and \$2,000 to the American Tract Society. A liberal bequest was also made to the Union Congregational Church of South Weymouth. Church of South Weymouth.

The Rev. James Sibree, a Congregational clergyman, concludes to-day a pastorate in Hull, England, of fifty years. In recognition of his long and useful ministry a fund, to which members of other churches as well as of his own have subscribed liberally, has been passed for have subscribed liberally, has been raised for the purchase of a suitable testimonial to com-memorate the anniversary. The Baptist Social Union, of Connecticut, met

at West Haven, Wednesday, about 100 mem-bers being present. After the dinner and speeches, which were much enjoyed, James L. Howard, of Hartford, was elected president for the ensuing year, and Edwin S. Wheeler, of New-Haven, and James B. Hoyt, of Stamford, were chosen vice-presidents.

Boston contains, it is said, 170 churches, which are divided denominationally as follows; Congregational, thirty-one; Roman Catholie, twenty-nine; Methodist, twenty-eight; Baptist and Unitarian, twenty-six each; and Episcopalian, twenty-three. There are seven Jewish synagogues. The sessions of the Sunday-school Assembly

at Round Lake, N. Y., which closed Tuesday, have been very successful. On the evening of the same day the sessions of the National Camp Meeting were begun. The first meeting of the committee of twenty-

five appointed to consider the question of pre-paring a creed and catechism for the use of the Congregational Church, will be held at Syra-Mr. E. N. Blake has promised to give \$30,000 toward endowing the Baptist Theological Seminary at Morgan Park, near Chicago, provided that \$45,000 more be raised before g

certain time. The Boston Young Men's Christian Association has purchased, for \$80,000, 10,000 squ feet of land at Boylston and Berkeley-sts., u

which a building for the use of the association Of the delegates from the United States to the Ecumenical Conference to be held in Lon-don next fall, fourteen are bishops, sixty-seven are doctors of divinity, and thirty-four are

In the city of Paris there are said to be eightynine Sunday-schools having 675 teachers and 7,596 scholars. The International Series of Lessons is used in thirty-two of these schools.

Tokio, Japan, has a Young Men's Christian Association, all the members of which are natives. The association is about to start 2 religious magazine.

The receipts last year of the British religious societies, as reported at the May anniversary meetings, amounted to \$8,685,000. The contributions of the Free Church of Scot-

and last year to religious objects amounted to

The Rev. Dr. Lorimer, of Chicago, expects that his new church will be ready in October. There are 568 Baptist churches in Pennsylvania, with a membership of 64,572.

CURRENT RELIGIOUS DISCUSSION.

We regard the physical improvement in the condition of Fresideat Garheid during the past week as an answer to prayer. There is no denying the very serious nature of the wound and the extreme solicitude of the surgeons, so that the danger in which he lay on the morning of the first Sabbath of this month was great. But on that day the united and fervent prayer sof thousands of congregations—of the entire thristian heart of the land—went up to God for him; while the same was probably true of mearly every Konconformist church in the Fatherhand. And from that hour to this mullions of requests have besieged the throne of grace that—if it be nossible—this cup may pass from us. Is it for much to think—uay, are we not bound to believe—that it has been in tender answer to those supplications that, so far, the sufferer has been so wonderfully carried over the imminent dangers which so thickly beset him i—(The Congregationalist.

We have seen some statements made, and they are official, as to the very slow rate of increase among the Congregationalists in this country daries the last year. It averages about half a member to each of their churches. The National Council would appear to think that the difficulty is in the antiquity of their creed, which has now been in use nearly three hundred years, and so they have appointed a committee to formulate a new creed and a new catechism. We shall look with interest to the result of their labors, and we feel assured that their new creed will not be worse than the one they now have. We suppose it would be to no purpose to call their attention to the Apostles and Niceno Creeds, as they have an odor of antiquity about them, being summaries of the fufth once delivered to the saints. The committee appointed numbers twenty-five, and, in the interest of harmony, it is possible that each member may contribute an article to the proposed creed. It is an age of revisions, and from revision to creation is but a short step beyond the sublime.—[The Churchman.] We have seen some statements made, and they

To reflective thinkers and reasoners, who are not blinded by prejudice and bigotry, the contrast be tween the religious zeal of Protestants and Catho tween the religious zeal of Profestants and Catho-less must stand out in bold relief. We witness this even daily in our cities, for, while our Catholia churches are crowded night and morning throughout the week with poor but pious worshippers, our Protestant churches are closed, and when opened are so peerly attended that their ministers choose rather to keep them shut than to make known the fact that their congregations reserve their religion, like good clothes, for Sunday wear.—[The New-York Tablet.

Colonel Ingersoll's last proposition is " to turn the churches into schools, the cathedrals into universi-ties, the preachers into teachers, the world into heaven, and let the next world take care of itself." We could say amen to this to a very large degree.